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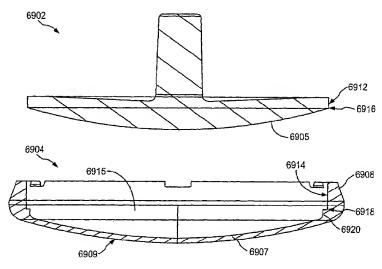
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(54) Title: SYSTEM AND METHOD FOR JOINT RESURFACE REPAIR



(57) Abstract: An implant for installation into a portion of an articular surface includes an implant shell component having a proximal load bearing wall with an outer proximal load bearing surface. A peripheral rim extending distally relative to the load bearing wall may provide a bone-facing distal pocket on the shell component. An inner implant component may be received in the bone-facing distal pocket of the implant such that a proximal surface of the inner component is spaced apart from a distal surface of the load bearing wall. The contour of the load bearing surface may be based on an original surface contour of an articular surface, and the load bearing wall of the shell component may be a deflectable wall, so that the load bearing surface can deflect under an applied load. The space between the load bearing wall and the inner implant may include a compressible fluid such as elastomeric gels.



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International application No.
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A. CLASSIFICATION OF SUBJECT MATTER			
IPC(7) : A61F 2/38			
US CL : 623/20.14 According to International Patent Classification (IPC) or to both national classification and IPC			
Minimum documentation searched (classification system followed by classification symbols) U.S.: 623/20.14, 20.15, 20.11, 20.23, 20.27, 20.29, 20.31, 18.11, 19.11, 20, 20.21, 20.18			
U.S.: 023/20.14, 20.13, 20.11, 20.23, 20.27, 20.23, 10.11, 13.11, 20, 20.21, 20.10			
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched			
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)			
East implant, component			
C. DOCUMENTS CONSIDERED TO BE RELEVANT			
		ppropriate of the relevant passages	Relevant to claim No.
Category *	Citation of document, with indication, where appropriate, of the relevant passages US 5,019,104 A (WHITESIDE ET AL) 28 MAY 1991 (28.05.1991), see entire document.		1-21
, A	05 3,013,104 A (WIII IESIDE ET AL) 20 MAI 1331 (20.03.1331), 500 CHIIC GOUIIICAE		
x	US 5,383,937 A (MIKHAIL) 24 JANUARY 1995 (24.01.1995), see entire document.		
X	US 5,702,467 A (GABRIEL ET AL) 30 DECEMBER 1997 (30.12.1997), see entire		1-21
	document.		1-21
X	US 5,480,443 A (ELIAS) 02 JANUARY 1996 (02.01.1996), see entire document.		1-21
x	US 6,315,798 B1 (ASHBY ET AL) 13 NOVEMBER 2001 (13.11.2001), see entire		1-21
	document.		
X	US 5,702,465 A (BURKINSHAW) 30 DECEMBER 1997 (30.12.1997), see entire		
	document.		
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